

CLAIMS

1. A surface treatment method for treating a surface of a metal material by heating said metal material, said surface treatment method comprising:

5 removing a passive film by heating said metal material in a place in which amino resin is present.

2. The surface treatment method according to claim 1, wherein said amino resin is applied to said surface of said metal material to heat said metal material.

10 15 3. The surface treatment method according to claim 2, wherein said amino resin is applied to said surface of said metal material by a solvent.

20 4. The surface treatment method according to claim 1, wherein said amino resin is placed in a heat treatment furnace together with said metal material to heat said metal material.

25 5. The surface treatment method according to any one of claims 1 to 4, wherein melamine resin, urea resin, aniline resin, or formalin resin is used as said amino resin.

6. The surface treatment method according to any one

of claims 1 to 5, wherein said surface of said metal material is modified by forming a hardened layer or a compound layer on said surface of said metal material subsequently to heating said metal material.

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7. The surface treatment method according to any one of claims 1 to 5, wherein said surface of said metal material is modified by forming a hardened layer or a compound layer on said surface of said metal material while heating said metal material.

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8. The surface treatment method according to claim 6 or 7, wherein nitriding or carburizing is performed.